

To outline the unknown area never seen by man, there have been plotted all drifts of ships as well as sledge expeditions and airplanes & airship flights. The radius of visible horizon (R), computed by using the formula:

- $R = 1.414 \sqrt{H}$ feet, accepted:
- For drifting ships — 15 miles (on the basis of following considerations:
 - For sledge expeditions — 15 miles
 - Height of the ship — most accepted about 50 feet, which gives R of 5 miles approx. (height about 15 miles)
 - maximum elevation of hummocks — 50 ft. — R of 2.5 miles
 besides that, all sledge expeditions have taken place during the light season, while ships' drifts have occurred also during the dark season which certainly reduced their R.
 - although De Long estimates the distance they saw Jeannette I. at about 40 miles, but on the other hand it is known that in other cases the islands have not been seen even from distances much less than that:
 - Vega, From Zaryssa Expeditions did not see the Tsesarevich Alap's I at a distance of 30 miles from Cape Chelyuskin about 80 feet high.
 - Russian Expedition to the Arctic ("Taimir" and "Vaigach") did not see Jochov I. at a distance of 20 miles in 1913.
 - "Vaigach" (ship expedition) never saw Blyanka I. at a distance of 30 miles to the east from her winter quarters at $76^{\circ} 5' N$, $100^{\circ} 10' E$ but she saw Jeannette I. at a distance of 15 miles only in very favorable atmospheric conditions.
- III. For Byrd flight R is accepted equal to 50 miles from Spitzbergen to 60 miles at the North Pole.
- IV. For Amundsen and Ellsworth airplane flight in 1925 — R is plotted from "Our Polar Flight", p. 257.
- V. For the Norge flight R is accepted as decreasing from 60 miles at the North Pole (that of Byrd) to 30 miles at $84^{\circ} N$, and farther down to Alaska.
- VI. For Wilkins flight R is accepted equal to 30 miles (The New York Times, April 8, 1926, although there is indication that altitude of flight was about 7000 feet, which would give R about 90 miles).

Only last drift of the Maud is plotted approximately for the lack of information.

N.T.

Aerial Exploration of the Arctic.

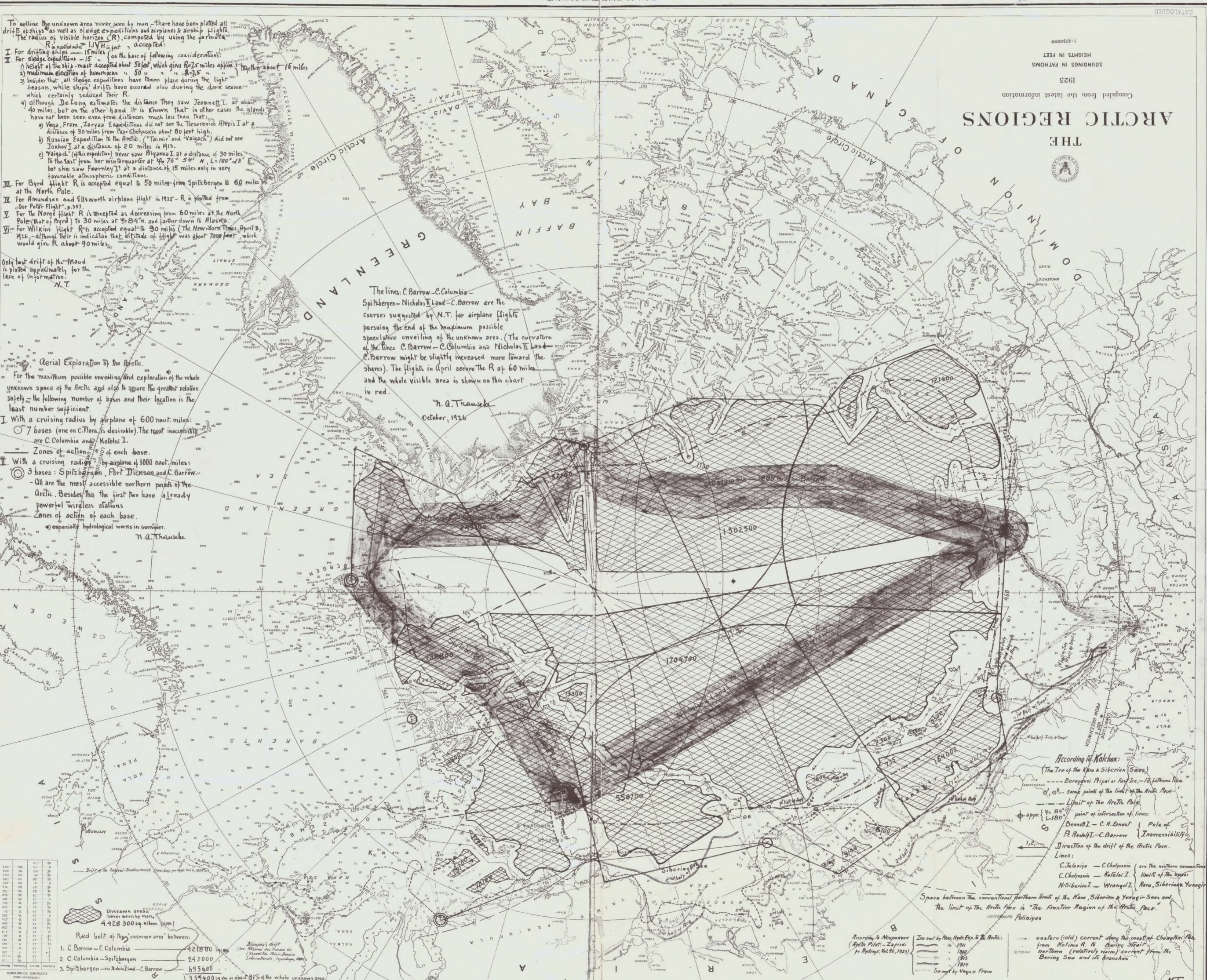
For the maximum possible unveiling and exploration of the whole unknown space of the Arctic and also to secure the greatest relative safety — the following number of bases and their location is the least number sufficient.

- With a cruising radius by airplane of 600 naut. miles:
 - 7 bases (one on C. Flora is desirable). The most inaccessible are C. Columbia and Kotelni I.
- Zones of action of each base.
- With a cruising radius by airplane of 1000 naut. miles:
 - 3 bases: Spitzbergen, Fort Dickson and C. Barrow.
 - All are the most accessible northern points of the Arctic. Besides this the first two have already powerful wireless stations.
 - Zones of action of each base.
 - especially hydrological works in summer.

N.A. Trautsch

The lines: C. Barrow — C. Columbia — Spitzbergen — Nicholas I. Land — C. Barrow are the courses suggested by N.T. for airplane flights pursuing the end of the maximum possible speculative unveiling of the unknown area. (The curvature of the lines C. Barrow — C. Columbia and Nicholas I. Land — C. Barrow might be slightly increased more toward the shores). The flights in April secure the R of 60 miles and the whole visible area is shown on this chart in red.

N.A. Trautsch
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According to Kolchak:
(The Ice of the Kara & Siberian Seas)
--- Boregoi Pipai or East Ice, — 12 fathoms thick
--- Same points of the limit of the Arctic Pack
--- Limit of the Arctic Pack
--- point of intersection of lines:
--- $12^{\circ} 18' N$ — 180° — 180° — 180°
--- Beneath I. — C. A. Ernest (Pole of Inaccessibility)
--- P. Rudolf I. — C. Barrow
Direction of the drift of the Arctic Pack.
Lines:
C. Tolunai — C. Chelyuskin (are the northern conventional limits of the Arctic Pack)
C. Chelyuskin — Melai I. (limits of the Arctic Pack)
N. Siberian I. — Wrangel I. Kara, Siberian Seas
Space between the conventional northern limit of the Kara, Siberian & Yonagiri Seas and the limit of the Arctic Pack is "The Frontier Region of the Arctic Pack."

According to Neumann (Hydrog. 1917) — Zaryssa (Hydrog. 1916, 1923)
--- Ice met by Byrd, Hyd. Exp. to the Arctic:
--- in 1911
--- in 1923
--- in 1924
--- Ice met by Vega & Fram

eastern (cold) current along the coast of Chukotka from Melai I. to Barrow Strait northern (relatively warm) current from the Bering Sea and its branches

N.T.

Unknown area never seen by man. 4,428,300 sq. miles. (approx.)

Red belt of the unknown area between:

1. C. Barrow — C. Columbia — 421800
2. C. Columbia — Spitzbergen — 242000
3. Spitzbergen — Nicholas I. Land — C. Barrow — 695600

1,359,400 sq. miles, or about 31% of the whole unknown area